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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/735,315	12/12/2000	Jesse Chin	10992775-1	4955

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EXAMINER

RODRIGUEZ, ARMANDO

ART UNIT PAPER NUMBER

2828

DATE MAILED: 05/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/735,315

Applicant(s)

CHIN ET AL.

Examiner

Armando Rodriguez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-40 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 21-27 and 29-38 is/are rejected.
7) ☒ Claim(s) 28,39 and 40 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 20, 2004 has been entered.

Response to Arguments

Applicant's arguments, see pages 6 and 7, filed January 26, 2004, with respect to the Heilman et al cited prior art as not teaching or suggesting a digital programmable negative peaking timer have been fully considered and are persuasive. However, independent claims 21 and 36 do not recite or imply such a digital circuit. The recited digital circuits of claims 21 and 36 pertain to temperature and aging waveform parameters.

Claim 29 implies the waveform shaping circuit, which provides a waveform for the negative peaking, as a digital circuit by being coupled to the digital controller and based on applicant's arguments.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 29-35 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 29 recites the limitation "the memory" in line 7. There is insufficient antecedent basis for this limitation in the claim. Applicant has recited the functional limitation of "accessing the memory" but has failed to define a memory and the structural relationship of the memory within the driver.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21-27 and 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shastri et al (PN 5,844,928) in view of Heilman et al (US 2002/0094000) and Olsen (PN 5,623,355).

In figure 2 Shastri et al illustrates a laser driver having a nonvolatile memory (20), a digital controller (36) where the controller compensates for aging and temperature fluctuations by adjusting the current, as described in columns 2 and 3.

Regarding claims 21, 23, 26, 27 and 36, figure 2 illustrates a nonvolatile memory (20) for storing coupled to digital controller (36), which is coupled to driver (43) for receiving the waveform parameters from the digital controller.

Shastri et al discloses in column 3 lines 32-40, digital representation of the bias current and modulation at the measured temperature and aging coefficient, but is silent as to the negative peaking of the laser system.

The dc and ac characteristics of the laser device are inherent within the laser of Shastri et al, furthermore the ac characteristics caused by the switching of on and off of the laser system, which is known in the art as undershoot or negative peaking as disclosed by Heilman et al in paragraph [0006]. Shastri et al discloses in column 4 line 11, the function of switching on and off which will inherently cause negative peaking.

Heilman et al discloses in the abstract a circuit for decreasing the negative peaking due to switching on and off of the laser.

Therefore it would have been obvious to a person having ordinary skill in the art to provide the laser system of Shastri et al with the circuit described by Heilman et al because it would decrease the negative peaking caused by the on and off of the modulated current.

Shastri et al is silent to using an array of lasers.

Olsen illustrates in figure 2 a laser transmitter having memory storage (18), a laser driver circuit (54). In column 3 lines 33-40 disclose factors, which affect the laser as aging and temperature fluctuations and where the processor compensates for these factors by elevating the laser drive current. In column 6 lines 8-18 disclose the addition of the digital-to-analog converters for their use in parallel semiconductor laser arrays.

Therefore, it would have been obvious at the time the invention was made to provide the laser system Shastri et al with a plurality of lasers having temperature and

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aging compensation, as taught by Olsen. Furthermore, it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art.

St. Regis Paper Co. v. Bemis Co., 193 USPQ 8.

Regarding claim 22, figure 2 of Shastri et al illustrates the digital controller receiving a maximum aging coefficient from the memory (20), which is provided to the driver for generating the waveform and illustrates temperature and aging compensation.

Regarding claim 24, figures 1 and 2 of Shastri et al illustrate an integrated digital controller (36), which provides a waveform signal to the driver based on the temperature sensor (38).

Regarding claim 25, figure 2 of Shastri et al illustrates an up/down counter for providing a waveform signal to driver.

Regarding claims 37 and 38, figure 2 of Shastri et al illustrates aging coefficient, bias current, modulation current and temperature compensation as parameters for the laser driver.

Allowable Subject Matter

Claim 29 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Regarding claim 29,

After reviewing applicant's arguments none of the prior arts alone or in combination discloses the claimed invention having the recited limitations, where a digital circuit provides negative peaking adjustments.

Claim 28,39,40 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Regarding claim 28,

None of the prior arts alone or in combination discloses the claimed invention having the recited limitations, where a memory stores negative peaking parameters.

Regarding claims 39,40,

None of the prior arts alone or in combination discloses the claimed invention having the recited limitations, where prior to operation, the driver provides digital programming of the negative peaking parameters.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Armando Rodriguez whose telephone number is 571-272-1952. The examiner can normally be reached on flex / M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Armando Rodriguez
Examiner
Art Unit 2828



Don Wong
Supervisor
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AR/DW